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10/511,641	10/18/2004	Shaily Verma	PU020133	6426
24498 7590 12/30/2009 Robert D. Shedd, Patent Operations THOMSON Licensing LLC P.O. Box 5312 Princeton, NJ 08543-5312				
EXAMINER				
BRANDT, CHRISTOPHER M				
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2617				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/511,641

## Applicant(s)

VERMA ET AL.

## Examiner

CHRISTOPHER M. BRANDT

## Art Unit

2617

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1, 3-8 and 10-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-8 and 10-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Paper No(s)/Mail Date \_\_\_\_\_
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

This Action is in response to applicant's amendment/arguments filed on October 8, 2009.

**Claims 1, 3-8, and 10-15** are now currently pending in the present application.

### ***Response to Arguments***

Applicant's arguments filed October 8, 2009 have been fully considered but they are not persuasive.

With regard to applicant's argument that Kallio, Ludwig, and Hamilton does not teach or suggest the claimed combined aspects of an interworking function, that is part of a WLAN, that enables the WLAN to appear as another PLMN to a selected PLMN, and that the WLAN interworking function serves to connect to a SGSN using a Gp interface, the examiner respectfully disagrees. As applicants have pointed out, Kallio discusses how a connection can be made from a WLAN to a GSM network via a hotspot LAN using the A-Interface Gate (SWG) under the control of a Network Management System. Applicants then state that Kallio discusses the more common A-Interfaces but does not teach or suggest use of Gp interfaces in a WLAN connection. This last statement is the reason the examiner relies on Ludwig. One of ordinary skill in the art often substitutes one feature of one system for another feature of another system. Ludwig, in column 6 lines 17-29 (as applicants have addressed) teaches the use of a Gp interface for interconnecting different PLMNs. In addition, Ludwig gives clear motivation for the use of Gp interfaces, the motivation being the security functionality (this addressed applicant's

argument of no motivation to combine the cited references). Moreover, Ludwig also teaches that local area networks are arranged within this system (column 7 lines 1-6). Therefore, one would be motivated to use Ludwig's Gp interface into Kallio's wireless local area network. The examiner further notes that adequate motivation was provided for combining Hamilton as Hamilton relates to packet switched data services on a wireless network (abstract).

Accordingly, the claims remain written such that they read upon the cited references.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1, 3-6, 8, 10-13, and 15** are rejected under 35 USC 103(a) as being unpatentable over **Kallio (US PGPUB 2002/0147008 A1)** in view of **Ludwig (US Patent 6,256,498 B1)** and further in view of **Hamilton et al. (US PGPUB 2002/0177431 A1, hereinafter Hamilton)**.

Consider **claim 1 (and similarly applied to claims 8 and 13)**. Kallio discloses a wireless Local Area Network (WLAN) (paragraph 28), comprising:

an access point for communicating with a plurality of mobile stations (figure 1, paragraphs 10, 29, read as the WMC is arranged to serve as a WLAN access point); and

an interworking function within the WLAN, coupled between the access point and a selected GSM network, via an interface gate, the interworking function of the WLAN enabling communications between the selected GSM and the WLAN wherein the WLAN appears as another GSM to the selected GSM (paragraph 28, read as a Mobile Transaction Server (MTS) 220 and a hotspot LAN 230 that are connected to the GSM network 100, via a A-interface gate (AGW) 310).

Kallio substantially discloses the claimed invention except he fails to teach Public Land Mobile Network (PLMN) and an inter-PLMN backbone using a Gp interface.

However, Ludwig discloses a Public Land Mobile Network (PLMN) and an inter-PLMN backbone (column 5 lines 57-60, column 6 lines 23-29, read as the inter-PLMN backbone

network is the IP network interconnecting GSN support nodes and intra-PLMN backbone networks in different public land mobile networks using a Gp interface).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Ludwig into the invention of Kallio in order to integrate WWW services into a digital cellular communication network and also to provide the functionality of the Gn interface plus security functionality required for inter-PLMN communication (column 10 lines 27-37).

In addition, Kallio and Ludwig fail to explicitly teach wherein the interworking function enables communications with a Serving General Packet Radio Service Support Node (SGSN) of the selected PLMN.

However, Hamilton teaches wherein the interworking function enables communications with a Serving General Packet Radio Service Support Node (SGSN) of the selected PLMN (paragraph 40, read as the border gateway extends the GPRS backbone network that are physically located in different PLMNs. One can observe from figure 1 that the border gateway is located between a base station subsystem (i.e. access point) and the PLMN).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Hamilton into the invention of Kallio and Ludwig in order to more optimally provide a bearer service for packet switched data (paragraph 3).

Consider **claim 3 and as applied to claim 2**. Kallio and Ludwig disclose wherein the interworking function performs the functions of a logical Serving General Packet Radio Service (GPRS) Support Node (SGSN) (Ludwig; column 6 lines 7-29).

Consider **claim 4 and as applied to claim 3**. Kallio and Ludwig disclose wherein the interworking function is viewed by the selected PLMN as an SGSN in another UMTS/GPRS PLMN (Ludwig; column 6 lines 7-29).

Consider **claim 5 and as applied to claim 1**. Kallio and Ludwig disclose wherein the selected PLMN includes Session Management/GPRS mobility management (SM/GMM) procedures, which are reused in the WLAN by the use of an adaptation layer in a mobile dual-protocol stack and in the IWF to WLAN interface to mimic the functionality of a Radio Resource Control (RRC) protocol sub-layer (Kallio; paragraph 30, Ludwig; column 6 lines 6-16).

Consider **claim 6 and as applied to claim 1**. Kallio and Ludwig disclose wherein the interworking function utilizes a GPRS tunneling protocol between a GGSN and the interworking function for downlink traffic coming from the GGSN to reduce UMTS traffic, and provides a common Internet access to all users for all other traffic to reduce the traffic between the interworking function and the GGSN (Kallio; paragraph 23, Ludwig; column 5 lines 40-47).

Consider **claim 10 and as applied to claim 8**. Kallio and Ludwig disclose wherein the providing step comprises providing an interworking function that mimics the functions of a Serving General Packet Radio Service (GPRS) Support Node (SGSN) (Ludwig; column 6 lines 7-29).

Consider **claim 11 and as applied to claim 8**. Kallio and Ludwig disclose further comprising utilizing a GPRS tunneling protocol between a GGSN and the interworking function for downlink traffic coming from the GGSN to reduce traffic on the selected PLMN (Kallio; paragraph 23, Ludwig; column 5 lines 40-47).

Consider **claim 12 and as applied to claim 8**. Kallio and Ludwig disclose further comprising an adaptation layer in a mobile dual-protocol stack in the interworking to WLAN interface to mimic the functionality of a Radio Resource Control (RRC) protocol sub-layer, whereby the session management/GPRS mobility management (SM/GMM) procedures are reused in the WLAN (Kallio; paragraph 30, Ludwig; column 6 lines 6-16).

Consider **claim 15 and as applied to claim 13**. Kallio and Ludwig disclose further comprising the step of providing an interworking function that mimics the functions of a Serving GPRS Support Node (SGSN) such that the WLAN appears as another PLMN to the selected PLMN (Kallio; paragraph 35, Ludwig; column 6 lines 7-29).

**Claims 7, 14** are rejected under 35 USC 103(a) as being unpatentable over **Kallio (US PG PUB 2002/0147008 A1)** in view of **Ludwig (US Patent 6,256,498 B1)** in view of **Hamilton et al. (US PG PUB 2002/0177431 A1, hereinafter Hamilton)** and further in view of **Rune (US Patent 6,212,390 B1)**.

Consider **claims 7 and 14 and as applied to claim 1 and 13, respectively**. Kallio, Ludwig, and Hamilton disclose the claimed invention except they fail to explicitly disclose



wherein the selected PLMN comprises a Universal Mobile Telecommunications System (UMTS) network.

However, Rune discloses wherein the selected PLMN comprises a Universal Mobile Telecommunications System (UMTS) network (column 1 lines 55-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Rune into the invention of Kallio, Ludwig, and Hamilton in order to support all the current wired and wireless technology offer and have the ability to support new applications that are common to both, or unique to UMTS (column 1 lines 46-54).

### **Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

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Randolph Building  
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Brandt whose telephone number is (571) 270-1098.

The examiner can normally be reached on 7:30a.m. to 5p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Christopher M Brandt/

Examiner, Art Unit 2617

December 21, 2009

/George Eng/

Supervisory Patent Examiner, Art Unit 2617